

FEB 28 2007

Docket No. 740709-507
Application No.: 10/628,240
Page 9 of 15Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A flexible heat exchanger comprising a pair of plane flexible multilayer thermoplastic polyimide polymer films each of which comprises an aromatic polyimide substrate film showing no glass transition temperature or a glass transition temperature of 340°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C ~~fixed to the substrate film in such manner that in which the surface films of the flexible multilayer thermoplastic polyimide films face each other and, which are in part fused together, whereby producing between the flexible multilayer thermoplastic polyimide polymer films a conduit pattern through which a fluid passes,~~

wherein said flexible multilayer thermoplastic polyimide films have flexible heat exchanger has a thickness in the range of 10 [[5 µm]] to 125 µm [[20 mm]] and comprises a linear expansion coefficient of MD, a linear expansion coefficient of TD and an average of linear expansion coefficients of MD and TD, in the range of 10x10⁻⁶ to 35x10⁻⁶ cm /cm/°C at 50-200°C.

2-4. (Cancelled)

5. (Previously Presented) The flexible heat exchanger of claim 1, further comprising a heat conductive film on a surface thereof.

6. (Original) The flexible heat exchanger of claim 5, wherein a flexible film having a heat radiant metal layer on one side is fixed to the heat conductive film.

7. (Original) The flexible heat exchanger of claim 6, which has a heat resistant porous film on a surface having no heat conductive film thereon.

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8. (Currently Amended) A space vehicle having the flexible heat exchanger of claim 1 on a surface thereof[[.]], in which the flexible heat exchanger comprises a pair of flexible multilayer thermoplastic polyimide films each of which comprises an aromatic polyimide substrate film showing no glass transition temperature or a glass transition temperature of 340°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C in which the surface films of the flexible multilayer thermoplastic polyimide films face each other and are in part fused together, whereby producing between the flexible multilayer thermoplastic polyimide films a conduit pattern through which a fluid passes, wherein said flexible multilayer thermoplastic polyimide films have a thickness in the range of 10 to 125 µm and comprises a linear expansion coefficient of MD, a linear expansion coefficient of TD and an average of linear expansion coefficients of MD and TD, in the range of 10×10^{-6} to $35 \times 10^{-6} \text{ cm/cm}^{\circ}\text{C}$ at 50-200°C.

9-20. (Cancelled)

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